

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Previously Presented) A processor-implemented method comprising:  
receiving a binary sequence of values, the values to be used in an application as a varying-radix sequence of values, the varying-radix sequence of values to represent bit distribution information for the binary sequence of values; and  
generating the varying-radix sequence of values from the binary sequence of values via a radix unit executed by the processor, the radix unit to  
determine a number of positions for the varying-radix sequence of values,  
determine the maximum radix for the varying-radix sequence of values, the maximum radix based on a set of rules for the application,  
determine the remaining radices for the varying-radix sequence of values based on the maximum radix and the set of rules for the application, and  
determine a value for each position of the varying-radix sequence of values.
- 2-5. (Cancelled).
6. (Currently Amended) The method of claim 1 further comprising:  
converting the varying-radix sequence of values into a decimal value;  
converting the decimal value into an additional binary sequence;  
transmitting the additional binary sequence and the number of positions **for the varying-radix sequence of values;**

restoring the additional binary sequence to the decimal value;  
generating the varying-radix sequence of values from the decimal value and the number of positions; and  
reconstructing the binary sequence from the varying-radix sequence of values.

7-16. (Cancelled).

17. (Previously Presented) A machine-readable storage medium that provides instructions, which when executed by a set of one or more processors, cause said set of processors to perform operations comprising:

receiving a binary sequence of values, the values to be used in an application as a varying-radix sequence of values, the varying-radix sequence of values to represent bit distribution information for the binary sequence of values; and

generating the varying-radix sequence of values from the binary sequence of values via a radix unit executed by the processor, the radix unit to

determine a number of positions for the varying-radix sequence of values,

determine the maximum radix for the varying-radix sequence of values, the maximum radix based on a set of rules for the application,

determine the remaining radices for the varying-radix sequence of values based on the maximum radix and the set of rules for the application, and

determine each value for each position of the varying-radix sequence of values.

18-21. (Cancelled).

22. (Currently Amended) The machine-readable storage medium of claim 17 further comprising:

converting the varying-radix sequence of values into a decimal value;

converting the decimal value into an additional binary sequence;

transmitting the additional binary sequence and the number of positions **for the varying-radix sequence of values**;

restoring the additional binary sequence to the decimal value;

generating the varying-radix sequence of values from the decimal value and the number of positions; and

reconstructing the binary sequence from the varying-radix sequence of values.

23-25. (Cancelled).

26. (Currently Amended) An apparatus comprising:

a processor to ~~receiving~~ **receive** a binary sequence of values, the values to be used in an application as a varying-radix sequence of values, the varying-radix sequence of values to represent bit distribution information for the binary sequence of values; and

a radix unit operatively coupled to the processor to ~~generating~~ **generate** the varying-radix of values from the binary sequence of values via a radix unit executed by the processor, wherein generating the varying-radix sequence of values includes

determining a number of positions for the varying-radix sequence of values,

determining the maximum radix for the varying-radix sequence of values, the maximum radix based on a set of rules for the application,

determining the remaining radices for the varying-radix sequence of values based on the maximum radix and the set of rules for the application, and

determining each value for each position of the varying-radix sequence of values.

27. (Currently Amended) The apparatus of claim 26, the processor to further convert the varying-radix sequence of values into a decimal value, convert the decimal value into an additional binary sequence, transmit the additional binary sequence and the number of positions **for the varying-radix sequence of values**, restore the additional binary sequence to the decimal value, generate the varying-radix sequence of values from the decimal value and the number of positions, and reconstructing the binary sequence from the varying-radix sequence of values.

28. (Previously Presented) The apparatus of claim 26, wherein the application includes a First In Last Out (FILO) stack and the binary sequence represents a sequence of operations on the FILO stack.

29. (Previously Presented) The apparatus of claim 26, wherein the application includes a Multi-Pulse Excited Linear Prediction (MPELP) speed codec.

30. (Previously Presented) The method of claim 1, wherein the application includes a First In Last Out (FILO) stack and the binary sequence represents a sequence of operations on the FILO stack.

31. (Previously Presented) The method of claim 1, wherein the application includes a Multi-Pulse Excited Linear Prediction (MPELP) speed codec.
32. (Previously Presented) The machine-readable storage medium of claim 17, wherein the application includes a First In Last Out (FILO) stack and the binary sequence represents a sequence of operations on the FILO stack.
33. (Previously Presented) The machine-readable storage medium of claim 17, wherein the application includes a Multi-Pulse Excited Linear Prediction (MPELP) speed codec.